

4th

5th

6th

7th

8th

Grade  
**5**

**meap**<sup>TM</sup>  
Michigan Educational Assessment Program

# *Item Descriptors*



***MATHEMATICS***  
***FALL 2010***

**MICHIGAN STATE BOARD OF EDUCATION  
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***NOTE: For each item listed throughout this booklet, the first statement is a summary of the Michigan Grade Level Content Expectation (GLCE) and the second statement is the descriptor for the item's stem or question.***

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Students were instructed to read the directions below silently as the test administrator read them aloud.

## PART 1

### DIRECTIONS:

In this part, you will answer multiple-choice mathematics questions. Some questions will ask you to view a picture, chart, or other mathematics-related information. Use that information with what you know to answer the question. You may **NOT** use a calculator for this part of the test.

You must mark all of your answers in Part 1 of your **Answer Document** with a No. 2 pencil. You may underline, highlight, or write in this test booklet to help you, but nothing in this test booklet will be scored. No additional paper may be used.

Mark only one answer for each question. Completely fill in the corresponding circle on your **Answer Document**. If you erase an answer, be sure to erase completely. Remember that if you skip a question in the test booklet, you need to skip the answer space for that question on the **Answer Document**. If you are not sure of an answer, mark your **best** choice.

A sample question is provided for you below.

### Sample Multiple-Choice Question:

Marty wants to put 75 CDs into cases. Each case holds exactly 8 CDs. What is the **least** number of cases that Marty will need to hold all his CDs?

- A 8
- B 9
- C 10
- D 11

For this sample question, the correct answer is **C**. Circle **C** is filled in for the sample question on your **Answer Document**.

Once you have reached the word **STOP** in your test booklet, do **NOT** go on to the next page. If you finish early, you may go back and check your work in Part 1 of the test **ONLY**. Check to make sure that you have answered every question. Do **NOT** look at any other part of the test.

NOTE: The directions for Part 2 are the same as the above instructions, but with calculators allowed.

- 1 N.ME.04.18:** Read, write, interpret, and compare decimals.

Translate the word form of a decimal into standard form.

- A** hundreds instead of hundredths
- B** ones instead of hundredths
- C** transposed tenths and hundredths
- D** correct

- 2 N.ME.04.18:** Read, write, interpret, and compare decimals.

Order four decimals from least to greatest.

- A** correct
- B** mixed order
- C** greatest to least
- D** mixed order

- 3 N.MR.04.19:** Translate between fractions and decimals.

Translate the decimal to a fraction.

- A**  $0.x = x + 1/10$
- B**  $0.x = x + 1/100$
- C**  $0.x = x/100$
- D** correct

- 4 N.MR.04.19:** Translate between fractions and decimals.

Translate the fraction to a decimal.

- A** correct
- B**  $ab/100 = a.b0$
- C**  $ab/100 = ab.0$
- D**  $ab/100 = ab0$

- 5 N.MR.04.22:** Locate fractions on a number line.

Name the location of a point on a number line in mixed number form.

- A** correct fractional part, but omitted whole number
- B** correct
- C** counted right to left from closest whole number
- D** correct fraction part, but used nearest whole number

- 6 N.MR.04.22:** Locate fractions on a number line.

Given a mixed number, locate the icon on the given number line.

- A** correct fractional part, but omitted whole number
- B** counted right to left from closest whole number
- C** correct whole number, incorrect fractional part
- D** correct

- 7 N.MR.04.23:** Know eighths and twelfths fraction families.

Given a model of two-fourths, identify the equivalent model.

- A** model shows thirds
- B** correct
- C** model shows sixths
- D** model shows one-fourth

- 8 N.MR.04.23:** Know eighths and twelfths fraction families.

Given a model of three-fourths, identify the equivalent model.

- A** model shows thirds
- B** model shows sixths
- C** model shows fourteenths
- D** correct

- 9 N.MR.04.25:** Write improper fractions as mixed numbers.

Translate the improper fraction to a mixed number.

- A** correct
- B**  $ab/c = a + b/c$
- C** incorrect mixed number
- D** incorrect mixed number

- 10 N.MR.04.25:** Write improper fractions as mixed numbers.

Translate the mixed number to an improper fraction.

- A** incorrect fraction
- B** correct
- C** incorrect improper fraction
- D**  $a + b/c = ab/c$

- 11 N.MR.04.26:** Compare and order up to three fractions.

Order from least to greatest one improper fraction and two mixed numbers.

- A** greatest to least
- B** mixed order
- C** correct
- D** mixed order

- 12 N.MR.04.26:** Compare and order up to three fractions.

Order three mixed numbers from greatest to least.

- A** correct
- B** mixed order, numerators from greatest to least
- C** least to greatest
- D** mixed order, denominators from greatest to least

- 13 N.ME.04.04:** List all factors and factor pairs of numbers up to 50.

Identify the number that is not a factor of the given number.

- A** factor
- B** factor
- C** factor
- D** correct

- 14 N.ME.04.04:** List all factors and factor pairs of numbers up to 50.

Select the list of all the factor pairs for a given number.

- A** correct
- B** three factor pairs, one non-pair
- C** three of four factor pairs
- D** two of four factor pairs

- 15 N.ME.04.05:** List factors and multiples.

Select the list of multiples for a given number.

- A** correct
- B** list contained four multiples and one non-multiple
- C** list contained four multiples and one non-multiple
- D** list contained four multiples and three non-multiples

- 16 N.ME.04.05:** List factors and multiples.

Identify the number that is not a multiple of two given numbers.

- A** multiple of both numbers
- B** multiple of both numbers
- C** correct
- D** multiple of both numbers

- 17 N.MR.04.07:** Use factors and multiples to compose and decompose numbers.

Determine which product does not result in a given value.

- A** product results in given value
- B** product results in given value
- C** product results in given value
- D** correct

- 18 N.MR.04.07:** Use factors and multiples to compose and decompose numbers.

Identify which number has exactly two positive factors.

- A** correct
- B** composite number
- C** composite number
- D** composite number

- 19 N.ME.04.09:** Solve multiplication problems using the distributive property.

$$(a \times b) + (c \times b) =$$

- A**  $a \times c \times b$
- B**  $a \times c + b$
- C** correct
- D**  $a + c + b$

- 20 N.ME.04.09:** Solve multiplication problems using the distributive property.

Given the product, show the distribution.

- A** correct
- B**  $ab \times c = (a0 + c) \times b$   
(where  $ab$  is 2-digit number, not product)
- C**  $ab \times c = (a0 \times b) + (b \times c)$   
(where  $ab$  is 2-digit number, not product)
- D**  $ab \times c = (a0 + b) + (c \times 1)$   
(where  $ab$  is 2-digit number, not product)

- 21 N.FL.04.10:** Multiply whole numbers and use the distributive property.
- Multiply the 3-digit number by the 2-digit number.
- A** correct
  - B** incorrect product
  - C** incorrect product
  - D** incorrect product

- 22 N.FL.04.10:** Multiply whole numbers and use the distributive property.
- Multiply the 4-digit number by the 1-digit number.
- A** incorrect product
  - B** incorrect product
  - C** incorrect product
  - D** correct

- 23 N.FL.04.11:** Divide wholes by 1-digit numbers and by 10.
- Divide the 4-digit number by 10.
- A** multiplied instead of divided
  - B** correct
  - C** correct quotient, but omitted remainder
  - D** divided by 100, but remainder greater than 10

- 24 N.FL.04.11:** Divide wholes by 1-digit numbers and by 10.
- Divide the 4-digit number by the 1-digit number.
- A** correct
  - B** used incorrect dividend
  - C** used incorrect dividend
  - D** divided by ten times the divisor

- 25 N.FL.04.12:** Find the value of unknowns in equations.

Identify the divisor shown as the variable in the equation.

- A** 1/10 of divisor
- B** correct
- C** 10 times the divisor
- D** 100 times the divisor

- 26 N.FL.04.12:** Find the value of unknowns in equations.

Identify the dividend shown as the variable in the equation.

- A** 1/10 of dividend
- B** incorrect dividend
- C** correct
- D** incorrect dividend

- 27 N.ME.04.15:** Know decimals up to two places and relate them to money.

Translate a decimal notation of money to words.

- A** transposed ones and tens place
- B** correct
- C** \$0.ab = ab dimes
- D** \$0.ab = a dollars, b pennies

- 28 N.ME.04.15:** Know decimals up to two places and relate them to money.

Translate expanded notation to standard notation.

- A** transposed tens and ones, tenths and hundredths
- B** transposed tens and ones
- C** transposed tenths and hundredths
- D** correct

- 29 N.MR.04.21:** Explain why equivalent fractions are equal.

Given a point on a number line, identify the non-equivalent fraction.

- A** equivalent fraction
- B** equivalent fraction
- C** correct
- D** equivalent fraction

- 30 N.MR.04.21:** Explain why equivalent fractions are equal.

Identify the fraction strip that is equivalent to the given fraction.

- A** non-equivalent fraction
- B** correct
- C** complement
- D** ratio of shaded to non-shaded area

- 31 N.MR.04.14:** Solve problems with whole number multiplication and division.

Solve a problem with the context of equal sharing.

- A** incorrect division
- B** correct
- C** multiplied by divisor
- D** multiplied by incorrect divisor

- 32 N.MR.04.14:** Solve problems with whole number multiplication and division.

Solve a contextualized multiplication problem.

- A** added
- B** incorrect multiplication
- C** incorrect multiplication
- D** correct

- 33 D.RE.04.01:** Construct tables and bar graphs from given data.

Match the words to the given table.

- A** incorrect table
- B** incorrect table
- C** correct
- D** incorrect table

- 34 D.RE.04.03:** Solve problems in tables and bar graphs; compare.

Match the bar graph to a table with tally marks.

- A** incorrect table
- B** incorrect table
- C** incorrect table
- D** correct

- 35 G.GS.04.02:** Identify shapes including triangles; use properties.

Identify the type of triangle shown.

- A** incorrect type of triangle
- B** incorrect type of triangle
- C** incorrect type of triangle
- D** correct

- 36 G.TR.04.04:** Recognize plane figures that have line symmetry.

Identify the letter with line symmetry.

- A** does not have line symmetry
- B** does not have line symmetry
- C** does not have line symmetry
- D** correct

- 37 M.PS.04.09:** Solve perimeter and area problems with compound shapes.

Identify the rectangle with the given perimeter.

- A** incorrect rectangle
- B** incorrect rectangle
- C** incorrect rectangle
- D** correct

- 38 M.TE.04.05:** Convert from one unit of measure to another.

Convert feet to inches.

- A** incorrect conversion
- B** 1 foot = 10 inches
- C** correct
- D** rounded up to nearest foot, then converted

- 39 M.TE.04.07:** Find the dimensions of rectangles, given other dimensions and perimeter or area.

Given the perimeter and length of a rectangle find its width.

- A** perimeter minus length
- B** length
- C** correct
- D** correct width if given perimeter was measure for area

- 40 M.TE.04.10:** Identify right angles and compare angles to right angles.

Identify the angle with a measure less than that of a right angle.

- A** correct
- B** obtuse angle
- C** obtuse angle
- D** obtuse angle

- 41 M.UN.04.01:** Measure using common tools; select units.

Select the unit of measure for area.

- A** unit of length
- B** correct
- C** unit of volume
- D** unit of mass

- 42 N.FL.04.32:** Add and subtract decimals up to two decimal places.

Subtract a decimal fraction in two places from a fraction in one place.

- A** incorrect subtraction
- B** correct
- C** subtracted smaller values from greater values
- D** incorrect subtraction

- 43 N.FL.04.34:** Estimate answers involving addition, multiplication, and subtraction.

Estimate the product of three 2-digit numbers.

- A**  $1/20$  of estimate
- B**  $1/10$  of estimate
- C**  $1/2$  of estimate
- D** correct

- 44 N.ME.04.01:** Read, write, and compare numbers up to 1,000,000.

Identify the middle value of a compound inequality.

- A** correct
- B** smaller value than both given numbers
- C** greater value than both given numbers
- D** greater value than both given numbers

- 45 N.ME.04.03:** Know the size and place value of numbers up to 1,000,000.

Identify a number with 2 in ten thousands place.

- A** thousands place
- B** correct
- C** hundreds place
- D** tens place

- 46 N.ME.04.16:** Know terminating decimals and related fractions.

Translate the fraction to a decimal.

- A**  $a/100 = 0.a0$  ( $a \neq 0$ )
- B**  $a/100 = 0.a^2$
- C** correct
- D**  $a/100 = 0.00a$

- 47 N.ME.04.17:** Locate tenths and hundredths on a number line.

Identify the location of a point on the number line.

- A** under by 0.15
- B** correct
- C** over by 0.10
- D** over by 0.45

- 48 N.ME.04.20:** Understand fractions as parts of a set of objects.

Determine the fraction for a set of shapes that is shaded.

- A** correct
- B** non-shaded portion
- C** ratio of shaded to non-shaded shapes
- D**  $1/\text{number of shaded shapes}$

- 49 N.ME.04.24:** Know improper fractions and locate them on a number line.

Locate the improper fraction on the number line.

- A** under by  $\frac{3}{2}$
- B** under by  $\frac{5}{8}$
- C** correct
- D** over by  $\frac{3}{4}$

- 50 N.MR.04.06:** Know prime numbers.

Identify the prime number.

- A** composite
- B** correct
- C** composite
- D** composite

- 51 N.MR.04.13:** Use the relationship between multiplication and division; check results.

Determine the multiplication expression used to check the given division sentence.

- A** dividend  $\times$  quotient
- B** dividend + divisor
- C** correct
- D** dividend + quotient

- 52 N.MR.04.27:** Add and subtract fractions less than 1.

Add two fractions.

- A** multiplied numerators and denominators
- B** added numerators and denominators
- C** correct
- D** incorrect addition

**53 N.MR.04.29:** Find the value of unknowns in equations with fractions.

Find the fractional addend represented as a variable in the given equation.

- A** added addend to sum
- B** incorrectly added addend to sum
- C** greater values minus smaller values in numerator
- D** correct

**54 N.MR.04.31:** Use statements to represent the addition and subtraction of decimals.

Translate the addition situation into an expression.

- A** division expression
- B** correct
- C** subtraction expression
- D** multiplication expression





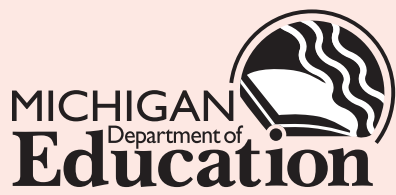
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